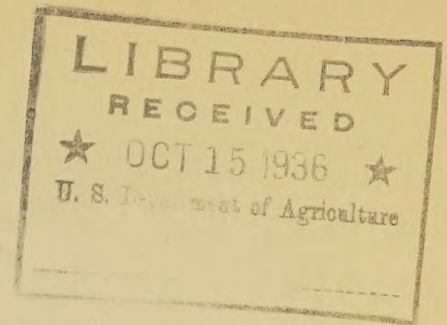


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Possibilities of Increasing Exports of Dry Skim Milk
from the United States

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by

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Introduction

Section 32, as amended, of the Act of August 24, 1935,^{1/} provides as follows:

"SEC. 32. There is hereby appropriated for each fiscal year beginning with the fiscal year ending June 30, 1936, an amount equal to 30 per centum of the gross receipts from duties collected under the customs laws during the period January 1 to December 31, both inclusive, preceding the beginning of each such fiscal year. Such sums shall be maintained in a separate fund and shall be used by the Secretary of Agriculture only to (1) encourage the exportation of agricultural commodities and products thereof by the payment of benefits in connection with the exportation thereof or of indemnities for losses incurred in connection with such exportation or by payments to producers in connection with the production of that part of any agricultural commodity required for domestic consumption; (2) encourage the domestic consumption of such commodities or products by diverting them, by the payment of benefits or indemnities or by other means, from the normal channels of trade and commerce; and (3) reestablish farmers' purchasing power by making payments in connection with the normal production of any agricultural commodity for domestic consumption. Determinations by the Secretary as to what constitutes diversion and what constitutes normal channels of trade and commerce and what constitutes normal production for domestic consumption shall be final. Provided, The sums appropriated under this section shall be expended for such one or more of the above-specified purposes, and at such times, in such manner, and in such amounts as the Secretary of Agriculture finds will effectuate substantial accomplishment of any one or more of the purposes of this section: Provided further, That no part of the funds appropriated by this section shall be used for the payment of benefits in connection with the exportation of unmanufactured cotton."

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^{1/} "An Act to amend the Agricultural Adjustment Act, and for other purposes", Public No. 320, 74th Congress.

The following is an analysis of the factors involved in a program pointed towards the exportation of dry skim milk from the United States through the payment of bounties to exporters. It will be seen below that, on the basis of prevailing price relationships, the expansion of exports on a competitive basis at the present time would be difficult if not impossible.

I

Foreign Trade of the United States
in Dry Skim Milk

Exports. - Statistics relating to exports of dry skim milk are available only for the period since 1932. Prior to that year the Customs Bureau did not distinguish between dry skim milk and dry whole milk and dry cream. In table 1 are shown exports of dry milk (whole and skim) and dry cream from 1925 to 1931, by countries of destination. Exports of these products amounted to 3,648,988 pounds in 1925, decreased to 2,660,921 pounds in 1926, but increased thereafter to 6,223,284 pounds in 1930 and to 12,790,303 pounds in 1931. Exports declined to 3,577,000 pounds in 1932 and to 2,450,000 pounds in 1933. They amounted to 3,122,000 pounds in 1934 and to 2,752,000 pounds in 1935.

The five most important importers of American dry milk and cream in 1925 were, in the order of their importance, the Netherlands, China, Japan, the United Kingdom, and Cuba. It should be noted that the Netherlands is the world's largest exporter of dry milk products, and, as will be shown below, exports a larger volume of these products to the United States than she imports. The five most important importers of dry milk and cream from the United States in 1931 were the United Kingdom, the Netherlands, France, Canada, and Mexico. (see table 1.)

In table 2 are shown exports from United States of dry skim milk from 1932 to 1934, by countries of destination, and the declared values of such exports. Total exports amounted to 1,672,522 pounds in 1932, 891,334 pounds in 1933, 1,430,035 pounds in 1934, and 1,162,564 pounds in 1935. The average declared values per pound for these years were as follows: 1932, 5.1 cents; 1933, 7.0 cents; 1934, 6.6 cents. The corresponding averages of manufacturers' wholesale selling prices of dry skim milk for human consumption, f.o.b. factory, in the United States, as reported by the American Dry Milk Institute, were as follows: 1932, 4.4 cents; 1933, 5.9 cents; 1934, 6.3 cents.

Countries importing over 100,000 pounds of dry skim milk from the United States in 1932, the quantities they imported, and the unit values of such imports were as follows: The United Kingdom, 584,755 pounds valued at 4.6 cents per pound; Mexico, 390,635 pounds valued at

Table 1. United States exports (domestic) of dry milk and cream,^{1/}
by countries of destination, 1925 to 1931

Country of destination	1925	1926	1927	1928	1929	1930	1931
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Belgium	187,380	450	22,024	29,518	225,480	45,550	75,243
France	133,257	160,697	171,857	214,198	193,925	446,860	895,283
Netherlands	530,826	0	0	362,424	363,816	69,000	1,302,550
United Kingdom	354,996	33,087	135,458	64,793	309,142	1,198,983	5,522,939
Canada	167,354	86,762	68,334	98,670	56,989	82,544	829,524
Guatemala	6,513	11,487	24,185	33,330	56,177	50,727	47,303
Panama	138,100	218,499	258,466	237,966	353,681	364,869	401,721
Mexico	134,684	211,787	281,032	326,748	333,282	606,834	521,646
Newfoundland and Labrador	6,866	5,927	14,619	18,617	37,547	38,064	55,377
Cuba	239,950	179,857	284,759	176,417	279,231	144,925	157,725
Argentina	5,601	25,615	33,534	72,058	71,131	121,076	168,960
Venezuela	63,711	179,513	192,529	200,543	446,715	304,358	229,240
China	408,254	221,689	472,802	436,625	386,575	353,747	194,642
Hong Kong	0	15,019	15,843	23,879	44,142	27,724	59,703
Japan	407,801	460,095	374,543	296,925	326,840	258,003	217,345
Philippine Islands	79,910	50,259	26,337	99,371	252,207	442,178	404,711
Other countries	783,785	800,178	949,276	1,327,893	1,605,421	1,667,842	1,706,391
Total	3,648,988	2,660,921	3,325,598	4,015,975	5,342,301	6,223,284	12,790,303

Compiled from United States Department of Commerce, Foreign Commerce and Navigation of the United States, 1925 to 1931.

^{1/} Includes dry whole and dry skim milk.

Table 2. United States exports (domestic) of dry skim milk, by countries of destination, 1932 to 1934

Country of destination	1932			1933			1934			1935 1/	
	Quantity Pounds	Value Dollars	Value per pound Cents	Quantity Pounds	Value Dollars	Value per pound Cents	Quantity Pounds	Value Dollars	Value per pound Cents	Quantity Pounds	Quantity Pounds
Belgium.....	0	0	-	0	0	-	33,600	1,780	5.3	2/	2/
France.....	15,500	775	5.0	250	23	9.2	13,250	1,026	7.7	2/	2/
Netherlands.....	0	0	-	0	0	-	108,900	4,540	4.2	2/	2/
United Kingdom..	584,755	26,739	4.6	0	0	-	311,690	16,486	5.3	180,625	
Canada	63,937	3,193	5.0	64,364	4,136	6.4	96,558	4,897	5.1	38,160	
Guatemala.....	7,275	470	6.5	7,225	519	7.2	9,000	732	8.1	6,000	
Panama.....	69,025	4,573	6.6	60,405	4,204	7.0	59,200	4,468	7.5	93,128	
Mexico.....	390,635	19,805	5.1	135,252	8,035	5.9	186,482	12,653	6.8	14,181	
Newfoundland and Labrador.....	31,700	1,769	5.6	13,600	821	6.0	52,984	3,766	7.1	29,943	
Cuba	2,436	132	5.4	2,500	160	6.4	10,050	759	7.6	159,789	
Argentina.....	92,170	5,527	6.0	83,400	5,998	7.2	224,000	16,800	7.5	176,594	
Venezuela.....	12,250	733	6.0	9,172	685	7.5	4,470	358	8.0	7,612	
China	38,782	1,974	5.1	59,230	3,328	5.6	21,295	1,870	8.8	54,909	
Hong Kong	20,723	1,270	6.1	23,500	1,659	7.1	32,320	2,696	8.3	23,050	
Japan	104,660	4,515	4.3	134,750	11,925	8.8	10,220	819	8.0	500	
Philippine Isls.	201,340	10,600	5.3	214,225	14,089	6.6	212,765	16,361	7.7	327,740	
Other countries	37,334	2,882	7.7	83,461	6,496	7.8	43,251	4,087	9.4	50,333	
Total	1,672	84,957	5.1	891,334	62,078	7.0	1,430,035	94,098	6.6	1,162,564	

Compiled from United States Department of Commerce, Foreign Commerce and Navigation of the United States, 1932 to 1934.

1/ Preliminary, compiled from records of the Bureau of Agricultural Economics, United States Department of Agriculture.

2/ Not shown separately.

5.1 cents per pound; Philippine Islands, 201,340 pounds valued at 5.3 cents per pound; and Japan, 104,660 pounds valued at 4.3 cents per pound. For 1934 the corresponding data were as follows: The United Kingdom, 311,690 pounds valued at 5.3 cents per pound; Argentina, 224,000 pounds valued at 7.5 cents per pound; Philippine Islands, 212,765 pounds valued at 7.7 cents per pound; Mexico, 186,482 pounds valued at 6.8 cents per pound; and the Netherlands, 108,900 pounds valued at 4.2 cents per pound. Countries importing over 50,000 pounds of dry skim milk from the United States in 1934, in addition to those mentioned above, were Canada, Panama, and Newfoundland and Labrador.

Imports. In table 3 are shown imports of dry milk and cream and malted milk, in varying classifications, from 1925 to 1935. From 1925 to 1929 imports were reported as milk powder and amounted to 5,429,549 pounds in the former year and 4,185,675 pounds in the latter year. The principal sources of imports in 1925 were Canada, supplying 4,349,662 pounds; New Zealand, supplying 591,128 pounds; and Australia, supplying 447,905 pounds. The principal sources in 1929 were the Netherlands and Canada, supplying 3,074,386 pounds and 1,084,612 pounds, respectively. Imports in 1930 were reported as dried milk and cream and amounted to 2,603,350 pounds. The Netherlands and Canada continued to be the principal sources of supply. From 1931 to 1933 imports were classified as dried and malted milk and amounted to 1,133,975 pounds in 1931, 591,448 pounds in 1932, and 561,224 pounds in 1933, with the Netherlands and Canada as the principal sources. In 1934 imports were classified as dried whole and dried skimmed milk and amounted to only 4,470 pounds. With the exception of 130 pounds which came from Canada, this quantity originated in countries listed in the table as "Other countries." Imports in 1935, classified as dry skim milk, amounted to 287,441 pounds, with the Netherlands supplying 1,221 pounds, Canada 158,368 pounds; and other countries, 127,852 pounds.

United States import duty. The Tariff Act of 1922 levied a specific duty of 1-1/2 cents per pound on dry skim milk and of 3 cents per pound on dry whole milk. The Tariff Act of 1930 increased these duties to 3 cents and 6-1/12 cents, respectively, and defined dry skim milk as that containing not more than 3 percent butterfat, and dry whole milk as that containing not more than 35 percent butterfat.

II

International Trade in Dry Milk

Little information is available with respect to the movement in international commerce of dry skim milk to the exclusion of other dry milk products, such as dry whole milk, malted milk, and dry cream. Statistics for most countries show only the aggregate foreign trade in these products, with no distinction between the various types. Some countries, namely New Zealand and Peru, include imports of dry milk in the classification for evaporated and condensed milk while Belgium includes exports in that classification. The international trade in sweetened dry milk, the statistics for which are included by some countries with those of the unsweetened dry milk, is a further factor tending to obscure the trade in dry skim milk of the type produced in the United States.

Table 3. United States imports of dry milk,^{1/} by countries of origin, 1925 to 1935

Country of origin	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935 ^{2/}
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Denmark	4,190	0	0	0	6,238	285	1,185	487	0	0	0
Netherlands	0	129,584	2,858,411	2,482,382	3,074,386	1,298,415	355,037	42,413	121,646	0	1,221
Canada	4,349,662	5,008,981	3,836,467	1,158,473	1,084,612	1,292,347	773,147	543,314	433,028	130	158,368
Australia	447,905	0	0	285	1,800	270	0	0	0	0	0
New Zealand	591,128	44,707	8,340	1,620	14,460	7,410	787	362	0	0	0
Other countries	36,664	40,578	124,754	252,477	4,179	4,623	3,819	4,872	6,550	4,340	127,852
Total	5,429,549	5,223,850	6,827,972	3,895,237	4,185,675	2,603,350	1,133,975	591,448	561,224	4,470	287,441

Compiled from United States Department of Commerce, Foreign Commerce and Navigation of the United States, 1925 to 1934.

- ^{1/} Classified as milk powder, 1925 to 1929; as dried milk and cream, 1930; as dried and malted milk, 1931 to 1933; as dried whole and dried skimmed milk, 1934; and as dry skim milk, 1935.
- ^{2/} Preliminary, compiled from records of the Bureau of Agricultural Economics, United States Department of Agriculture.

In table 4 is shown the foreign trade of selected countries in dry milk from 1931 to 1934. The foreign trade statistics for a number of other countries were examined but information with respect to the foreign trade in dry milk was not available.

Of the countries listed in table 4, the Netherlands ranks first as an exporter of dry milk. The data for that country include both the whole and skim milk product. Total exports from the Netherlands amounted to 29,360,000 pounds in 1931; 29,350,000 pounds in 1932; 32,739,000 pounds in 1933; and 29,420,000 pounds in 1934. New Zealand ranked second as an exporter of dry milk in 1934, shipments in that year amounting to 12,331,000 pounds, while Canada ranked third, with shipments of 4,692,000 pounds. It is pertinent to note that the United States ranked second as an exporter of dry milk in 1931, total shipments amounting to 12,790,000 pounds, including both the whole and the skim milk products.

The United Kingdom appears to be by far the world's largest exporter of dry milk. Imports into the United Kingdom of unsweetened dry milk ^{2/} amounted to 29,461,000 pounds in 1929; 28,049,000 pounds in 1930; 39,497,000 pounds in 1931; 35,875,000 in 1932; 31,369,000 pounds in 1933; 28,213,000 pounds in 1934; and 24,552,000 pounds in 1935. (See table 5.) The principal suppliers of the unsweetened product on the United Kingdom markets in 1929 were New Zealand, the Netherlands, Canada, and Australia, with imports from these countries of 11,161,000 pounds, 10,134,000 pounds, 3,854,000 pounds; and 1,393,000 pounds, respectively. With the exception of 1930 and 1931, when the United States ranked fourth and third, respectively, as the most important supplier, and of 1932, when the Netherlands was the most important source, the four countries mentioned have retained their relative positions as suppliers of unsweetened dry milk on the British markets. Imports from the United States in 1935 amounted to only 134,000 pounds as compared with 9,188,000 pounds in 1931.

The United Kingdom also imports sweetened dry milk. Imports are small, however, in comparison with imports of the unsweetened product, and amounted to 1,845,200 pounds in 1929; 1,608,768 pounds in 1930; 907,872 pounds in 1931; 696,192 pounds in 1932; 638,176 pounds in 1933; 421,120 pounds in 1934; and 625,296 pounds in 1935.^{3/}

France appears to be the world's second largest importer of dry milks. (See table 4.) However, her imports in 1934, amounting to 2,645,000 pounds, which also include concentrated solid milk with and without sugar, were less than one-tenth of the United Kingdom imports in the same year. At the same time, she exported 776,000 pounds of dry milk in 1934. In 1935 she imported only 1,981,000 pounds, while exporting 657,000 pounds. Other importing countries listed in table 4 are Japan,

^{2/} The statistics do not show whether this is skim or whole dry milk, but probably include both.

^{3/} Compiled from (United Kingdom) Imperial Economic Committee, Intelligence Branch, Dairy Produce Supplies, 1935, table 1, p. 28, 1936.

Table 4. Foreign trade of selected countries in dry milk, 1931 to 1934

Country	1931			1932			1933			1934 1/			1935 1/		
	Exports	Imports	1,000 pounds	Exports	Imports	1,000 pounds	Exports	Imports	1,000 pounds	Exports	Imports	1,000 pounds	Exports	Imports	1,000 pounds
Exporting countries															
Netherlands 2/	29,361	2,237		29,350	363		32,739	71		29,420	176		28,334		88
Canada	5,746	169		3,747	119		4,632	102		4,692	137				
New Zealand	8,922	0		11,188	0		11,230	0		12,331	0				
Australia 3/	2,363	451		3,561	384		4,969	279		2,865	198				
United States	12,790 4/	1,134 5/		1,673 6/	591 5/		891 6/	561 5/		1,430 6/	4 7/		1,163 6/		287 6/
Denmark 8/	585	244		604	103		502	146		388	9/				
Argentina 10/	66	0		9/	0		61	0		48	0				
Italy	46	5		23	3		30	6		45	3				
Importing countries															
United Kingdom	1,219	38,888		1,068	35,360		906	31,162		367	27,864				
France 11/	1,037	6,729		975	3,935		872	3,590		776	2,645		657		1,981
Japan	0	1,511		0	1,290		0	599		0	723		576		0
Philippine Islands	0	434		0	382		0	365		0	425				
Norway	41	150		22	59		3	100		9/	58				
Greece	-	68		-	21		-	29		-	29				
Belgium	12/	4,520		12/	12/		12/	12/		12/	12/				
Siam 1/	-	-		-	81		-	85		-	94				

Compiled from records of the Bureau of Agricultural Economics, United States Department of Agriculture.

1/ Preliminary.

2/ Includes whole and dry skim milk.

3/ Fiscal year ended June 30.

4/ Includes dry whole and skim milk and dry cream.

5/ Dry and malted milk.

6/ Dry skim milk.

7/ Dry whole and skim milk.

8/ Includes dry cream.

9/ Less than 500 pounds.

10/ Malted and dry milk.

11/ Imports include concentrated solid milk with and without sugar.

12/ Not available.

Table 5. United Kingdom imports of unsweetened dry milk, by countries of origin, 1929 to 1935

Country of origin	1929	1930	1931	1932	1933	1934	1935
	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>	<u>1,000 pounds</u>
New Zealand	11,161	9,790	11,472	11,834	14,348	14,494	14,647
Canada	3,854	2,911	4,707	3,203	4,183	3,176	3,462
Australia	1,393	638	762	3,642	3,047	1,599	1,164
Irish Free State	247	211	90	94	14	336	63
British India	-	-	-	56	21	-	-
Channel Islands	-	-	-	-	-	1	-
Netherlands	10,134	10,854	11,219	14,060	9,145	7,546	5,058
Denmark	504	393	349	180	96	88	3
Switzerland	640	867	515	221	51	54	4
Belgium	212	180	84	155	19	1	-
France	978	910	825	639	2	-	-
Germany	88	33	94	101	-	47	1/
Italy	-	-	190	-	-	-	1/
United States	245	1,228	9,183	1,532	192	715	134
Chile	-	-	-	122	156	55	-
Other countries	5	34	2	36	95	101	17
Total	29,461	28,049	39,497	35,875	31,369	28,213	24,552

Compiled from (United Kingdom) Imperial Economic Committee, Intelligence Branch, Dairy Produce Supplies, 1935, table 5, p. 30, 1936.

1/ Less than 500 pounds.

Note: Data in this table differ from those in table 4 since they are from different sources.

the Philippine Islands, Norway, Greece, Belgium, and Siam, but the aggregate imports of these countries in 1934, excluding Belgium for which no data are available, amounted to only 1,329,000 pounds. One of these countries, Japan, imported no dry milk during 1935, while her exports, apparently non-existent theretofore, were 576,000 pounds.

III

Tariffs and Import Restrictions in the United Kingdom and France

United Kingdom. - As of June 1, 1935, dry milk, unsweetened, was dutiable in the United Kingdom, upon importation from foreign countries, at 6 shillings per hundredweight (of 112 pounds) equivalent to 1.31 cents per pound at the average 1935 rate of exchange. The sweetened product was dutiable at 10 percent ad valorem, or the sugar duty, whichever was greater. 4/

With respect to the quantitative restriction of imports of powdered milk into the United Kingdom, the following quotation from an official British publication is of significance: 5/

"In view of the production of increasing quantities of milk in the United Kingdom surplus to the requirements of the liquid milk market, and in view also of the large stocks of processed milks in the hands of home manufacturers, the United Kingdom Government put forward, in 1933, proposals for the regulation of imports of cream, condensed whole milk, condensed skimmed milk, and milk powder. As a result, the Governments of the foreign countries mainly concerned agreed to limit their exports of these commodities to the United Kingdom.

.....

"Foreign countries whose exports of processed milks to the United Kingdom were comparatively small undertook to ensure as far as possible that their shipments would remain at previous low levels, while the Dominion Governments promised to cooperate and endeavor to limit their shipments to the quantities shipped in the corresponding period of 1932-33."

As a result of the voluntary regulation of imports of dry milk, agreed to by the principal exporting countries, imports during 1934 were approximately 10 percent below 1933 and 21 percent below 1932. Imports during 1935 were 13 percent below 1934. (See table 5.) For

4/ Dairy Produce Supplies, 1935, op. cit. Appendix I, p. 87.

5/ Ibid. Appendix II, p. 88.

the first quarter of 1935 the governments concerned agreed to limit exports to 75 percent of exports during the corresponding period of the twelve months, June 1932 to May 1933, while for the second quarter they agreed to limit exports to 70 percent, and for the last half of 1935 and the first quarter of 1936, to 65 percent. With respect to the United States, which is a minor supplier, these arrangements are called to the attention of the principal importers ^{6/} who presumably cooperate in restricting imports. It appears that any attempt to increase exports to the United Kingdom unduly would meet with opposition from other exporting countries and from home producers, and might lead to compulsory governmental regulation. In addition to present restrictions, United Kingdom producers are attempting to secure an increase in the duty on dry milk from foreign sources.^{7/}

France. - The import duty in France at the present time on dry whole or skim milk, without sugar, is 60 francs per 100 kilos, or 1.80 cents per pound at the average rate of exchange for 1935, plus an import tax of 2 percent of the duty-paid value.^{8/} Imports of dry milk are subject to quota restrictions. For the first quarter of 1936 the aggregate quota for condensed milk without sugar--solid--powder, and blocks, full cream or skimmed, was fixed at 1500 quintals, or 330,690 pounds. The quota for these items, "with added sugar", was fixed at 2500 quintals, or 551,150 pounds.^{9/} With respect to these quotas the British Board of Trade Journal says as follows: "As hitherto, the import of these goods is subject to license; permission to import will be granted only for clearly defined goods forming the object of commercial contracts concluded subject to a license being issued, but the Minister of Agriculture may dispense with this requirement when he deems it expedient." ^{10/}

The quota allotted to the United States by France for the unsweetened concentrated milks for 1935 was 37.6 metric tons (82,893 pounds) which compares with 74 metric tons for 1934 and 124 metric tons for 1932.^{11/} As a result of these restrictions, one American firm, manufacturing dry whole milk, opened a drying plant in France.^{12/}

Information with respect to the import restrictions in countries other than the United Kingdom and France is not available. Their production of dairy products is small. It seems unlikely therefore that

^{6/} Taylor, C. C., "The British Import Control of Milk Products", Foreign Crops and Markets, 32(1): 10, January 6, 1936.

^{7/} "Imports of Dairy Produce", The Dairy (London), p. 4. August 1935.

^{8/} From information furnished by the Division of Foreign Tariffs, Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce.

^{9/} (United Kingdom) Board of Trade Journal, January 2, 1936, p. 30.

^{10/} Ibid.

^{11/} Information obtained from Foreign Agricultural Service Division, Bureau of Agricultural Economics.

^{12/} Ibid.

import quotas would be adopted by many of them. Import duties in these countries are probably for revenue purposes, rather than for the protection of home industry. It seems unlikely, therefore, that many of them would discriminate against dry milk from the United States, if a subsidy were paid on our exports. At the same time exports from the United States to the Philippine Islands, which in 1935 was the largest importer of American dry skim milk, are free of duty.

IV

Foreign and Domestic Prices of Dry Skim Milk

Since the Netherlands is the most important exporter of dry milk, the prevailing price for dry skim milk in that country in relation to prices in the United States is an indication of the amount of the bounty that would have to be paid if the exportation of this product were to be subsidized on a large scale. This, however, involves the assumption that transportation costs to the importing countries from the United States and the Netherlands are approximately equal and that the products are comparable in quality. In table 6 are shown the average of manufacturers' wholesale selling prices of dry skim milk, f.o.b. factory, in the United States, and the average wholesale prices at Amsterdam, from January 1935 to August 1936, inclusive, and the differentials between these average prices. No information is available with respect to the type of product, that is, whether for human or animal consumption, that is represented by the quotation for Amsterdam, which is for powder in bags. The United States price is for dry skim milk for human consumption.

The differentials shown in table 6, being those of United States prices over Amsterdam prices, range from 2.9 to 5.2 cents. The average differential for 1935 was 4.1 cents, while the average for the first eight months of 1936 was 4.4 cents. On this basis a bounty of approximately 4 cents per pound would apparently be necessary if a large increase in exports of dry skim milk were to be obtained. Some increase in exports, above the present level, would probably take place upon the payment of a smaller bounty, especially if Amsterdam prices are for a lower quality product.

During the first seven months of 1936, 12,427,660 pounds of dry skim milk were imported into the United States from the Netherlands out of a total of 13,232,100 pounds from all foreign countries.^{13/} Since such milk is dutiable at 3 cents per pound upon importation into the United States, it appears that, under present price relationships, Dutch powder would have a competitive price advantage of at least that amount over United States powder, in any foreign market.

^{13/} Data from Bureau of Agricultural Economics, Division of Foreign Agricultural Service.

Table 6. Average wholesale prices per pound of dry skim milk for human consumption, f.o.b. factory, in the United States, and of dry skim milk at Amsterdam, Netherlands

Year and month	Average prices in United States	Average prices at Amsterdam ^{1/}	Differentials, United States over Amsterdam
	Cents	Cents	Cents
<u>1935</u>			
January	6.4	2.3	4.1
February	6.4	2.2	4.2
March	6.4	2.0	4.4
April	6.6	2.0	4.6
May	6.6	1.9	4.7
June	6.7	1.9	4.8
July	6.7	2.0	4.7
August	6.6	2.0	4.6
September	6.6	2.6	4.0
October	6.7	3.8	2.9
November	6.8	3.4	3.4
December	7.0	3.6	3.4
Average	6.6	2.5	4.1
<u>1936</u>			
January	7.5	4.0	3.5
February	7.7	3.9	3.8
March	7.9	3.8	4.1
April	8.0	3.8	4.2
May	8.2	3.6	4.6
June	8.4	3.2	5.2
July	8.6	3.8	4.8
August	8.8	4.1	4.7

United States prices from American Dry Milk Institute; Amsterdam prices, from Nederlandsch Weekblad voor Zuivelbereiding en-Handel, published by C. Misset, N. V., Doetinchem, Netherlands.

^{1/} Based on quotations for Tuesdays for powder in bags. Converted at current rates of exchange. Type of powder, i.e., whether for human or animal consumption, not indicated.

Dry milk prices for the United Kingdom, which is the principal importer of powdered milk, are not available. The following figures show the average declared values of imported unsweetened milk powder in the United Kingdom and the average of manufacturers' wholesale selling prices, f.o.b. factory, in the United States, of dry skim milk, as reported by the American Dry Milk Institute:

Year	Average declared value in the United Kingdom ^{14/}	Average price in the United States
1929	11.7 cents	8.4 cents
1930	10.8 "	7.1 "
1931	8.1 "	4.7 "
1932	5.9 "	4.4 "
1933	6.4 "	5.9 "
1934	8.1 "	6.3 "
1935	7.9 "	6.6 "

Since imports of unsweetened dry milk into the United Kingdom probably include the whole as well as the skim milk product, no conclusion can be drawn with respect to the relation between the above prices.

V

Gains to Producers from a Dry Skim Milk Subsidization Program

The gains to producers from a dry skim milk subsidization program are difficult to estimate since the raw material of this product is principally a by-product of fluid cream, and to a lesser extent of butter, production. Insofar as this program would result in an increase in prices of dry skim milk, it would tend to increase prices of fluid skim milk and hence would tend to increase the income of dairy producers. At the same time it would result in an increased utilization of fluid skim milk. At the present time only a fraction of the skim milk supplies is used for drying, although a portion is used for cottage cheese, cultured butter-milk, and casein. The production of dry skim milk in 1935 amounted to 262,955,000 pounds. Because of the limited world markets for dry skim milk, even under the most favorable conditions, from the point of view of trade barriers, exports of this product would necessarily be limited to only a small fraction of total domestic production. The increase in prices as a result of such a program as is under consideration here would be limited therefore, especially in view of the large supply of skim milk which may be readily made available for drying, of the excess productive capacity of the industry, and of the relative ease with which additional capacity may be installed.

^{14/} Computed from Dairy Produce Supplies, 1935, op. cit. p. 31, at current rates of exchange.

Benefits of a subsidization program to the dry skim milk industry may accrue, however, indirectly as a result of the tendency that such a program might have in stabilizing prices. This would be especially true if exports were to take place during periods of declining prices. However, this could also be accomplished through a program designed to purchase surplus quantities for the purpose of distribution among families on relief rolls, although the expenditures necessary to divert a given surplus would be greater in the latter case. The subsidization of exports of dry skim milk should also result in the development of permanent foreign markets for the American product. In view, however, of the fact that exports had amounted to at one time close to 13 million pounds per year but have declined since then to one million pounds, the problem appears to be one of price competition rather than the establishment of connections in foreign markets.

VI

Summary and Conclusions

1. The United Kingdom and France constitute the principal importers of dry milk, these countries taking a large portion of the dry milk entering international commerce.

2. An examination of the import restrictions existing in the United Kingdom and France indicates that exports to these countries could not be increased, regardless of whether such exports were subsidized or not, because of the existence of formal official quantitative restrictions in France and of voluntary restrictions in the United Kingdom, which, however, would be probably turned into compulsory restrictions if any country attempted to increase its exports unduly. At the same time, such restrictions, if once imposed, generally tend to persist even after the initial cause for their imposition is removed.

3. Countries other than the United Kingdom and France appear to offer only a limited outlet for dry skim milk.

4. Since the total quantity of dry milk, whole or skim, moving in international commerce amounts to from 50 to 55 million pounds per year, the quantity that could be exported, even under favorable conditions, would have to be limited to such quantities as would not unduly depress world prices. Because of the increase in milk production in the United Kingdom in recent years, resulting in an increase in production in dry milk, the volume of foreign dry milk which can be marketed in that country at remunerative prices has declined.

5. The amount of the bounty that would have to be paid if exports of dry skim milk were subsidized extensively would probably amount to 4 cents per pound, on the basis of price relationships prevailing since January 1935.

6. The primary benefit of a subsidization program with respect to dry skim milk would be its tendency to stabilize prices of this product.

7. It is probable that the same objectives could be accomplished through a domestic surplus-removal program, involving the diversion of surplus quantities of dry skim milk to families on relief rolls. The necessary expenditures in this case would be greater, however, since none of the cost would be recovered. On the other hand, such a program would be more advantageous in the long run, since consumers would be familiarized with the product and consumption probably would be permanently increased.